

Room sensor WL

Art.-No. BTERWL/BW



Operating Instructions



PROFILE OF INNOVATION

1. About these operating instructions

1.1 About these operating instructions

These operating instructions describe the room sensor WL (also referred to as "product" in these operating instructions). These operating instructions are part of the product.

- You may only use the product if you have fully read and understood these operating instructions.
- Verify that these operating instructions are always accessible for any type of work performed on or with the product.
- Pass these operating instructions as well as all other product-related documents on to all owners of the product.
- If you feel that these operating instructions contain errors, inconsistencies, ambiguities or other issues, contact the manufacturer prior to using the product.

These operating instructions are protected by copyright and may only be used as provided for by the corresponding copyright legislation. We reserve the right to modifications. The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe these operating instructions or from failure to comply with directives, regulations and standards and any other statutory requirements applicable at the installation site of the product.

2. Information on safety

2.1 Safety messages and hazard categories

These operating instructions contain safety messages to alert you to potential hazards and risks. In addition to the instructions provided in these operating instructions, you must comply with all directives, standards and safety regulations applicable at the installation site of the product. Verify that you are familiar with all directives, standards and safety regulations and ensure compliance with them prior to using the product. Safety messages in these operating instructions are highlighted with warning symbols and warning words. Depending on the severity of a hazard, the safety messages are classified according to different hazard categories.

NOTICE

NOTICE indicates a hazardous situation which, if not avoided, can result in equipment damage.

2.2 Intended use

This product may only be used to control the temperature in single rooms with an underfloor heating system (heating/cooling).

Any use other than the application explicitly permitted in these operating instructions is not permitted and causes hazards.

Verify that the product is suitable for the application planned by you prior to using the product. In doing so, take into account at least the following:

- All directives, standards and safety regulations applicable at the installation site of the product
- All conditions and data specified for the product
- The conditions of the planned application

In addition, perform a risk assessment in view of the planned application, according to an approved risk assessment method, and implement the appropriate safety measures, based on the results of the risk assessment. Take into account the consequences of installing or integrating the product into a system or a plant.

When using the product, perform all work and all other activities in conjunction with the product in compliance with the conditions specified in the operating instructions and on the nameplate, as well as with all directives, standards and safety regulations applicable at the installation site of the product.

2.3 Predictable incorrect application

The product must never be used in the following cases and for the following purposes:

- Explosive environments - In case of operation in explosive environments, sparks may lead to deflagration, fire or explosions.
- In conjunction with devices which are used for health-saving or life-saving purposes or whose operation may incur hazards to humans, animals or property.

2.4 Qualification of personnel

Only persons who are familiar with and understand the contents of these operating instructions and all other pertinent product documentation are authorized to work on and with this product. Qualified personnel must be able to predict and recognise potential hazards, based on their technical training, knowledge and experience, that may arise from the use of the product. Qualified personnel must be familiar with all regulations, standards and safety guidelines that have to be followed when working on and with the product.

2.5 Personal protective equipment

Always wear the required personal protective equipment. When performing work on and with the product, take into account that hazards may be present at the installation site which do not directly result from the product itself.

2.6 Modifications to the product

Only perform work on and with the product which is explicitly described in these operating instructions. Do not make any modifications to the product which are not described in these operating instructions.

3. Transport and storage

The product may be damaged as a result of improper transport or storage.

NOTICE

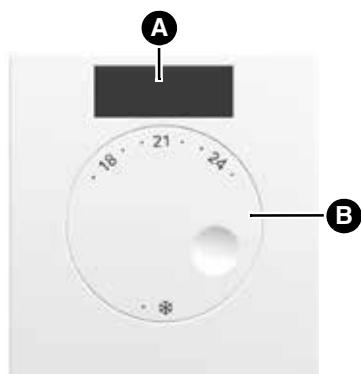
IMPROPER HANDLING

- Verify compliance with the specified ambient conditions during transport or storage of the product.
- Use the original packaging when transporting the product.
- Store the product in a clean and dry environment.
- Verify that the product is protected against shocks and impact during transport and storage.

Failure to follow these instructions can result in equipment damage.

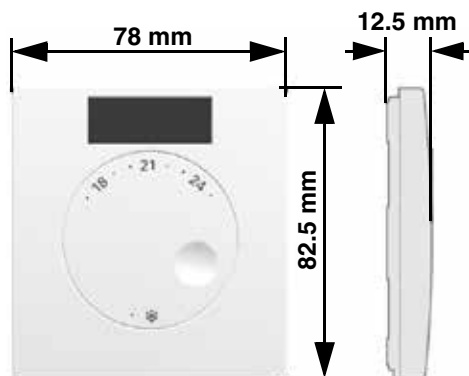
4. Product description

4.1 Overview



- A. Solar cell
- B. Rotary dial for adjusting the room temperature

4.2 Dimensions



4.3 Function

The single room temperature controller is used to control the temperature in rooms with underfloor heating system (heating/cooling).

The product measures the actual temperature of the corresponding room. The desired set temperature is selected via the rotary control of the corresponding product. The product transmits EnOcean® radio telegrams to the WL connection modules. Every product has a unique identifier. If multiple products are in use, the receiver can distinguish between the individual products.

The product features a solar cell for energy supply. If the product is to be set up in dark environments, an optional battery may be used (see "Technical data").

4.4 Approvals, conformities, certifications

The product complies with:

- EMC Directive (2014/30/EU)
- Low Voltage Directive (2014/35/EU)
- RoHS Directive (2011/65/EU)

The declaration of conformity can be accessed (downloaded) at www.bekotec-therm.de

4.5 Technical specifications

Parameter	Value
General specifications	
Dimensions (W x H x D)	78 x 82.5 x 12.5 mm
Weight	43 g
Housing material	PC
Colour	White, similar to RAL 9003
Temperature adjustment range/ temperature measuring range	8 ... 30 °C
Temperature measurement	0 ... 40 °C
Accuracy	± 1 K
Ambient conditions	
Ambient temperature for operation	-20 ... 60 °C
Ambient temperature storage	-20 ... 60 °C
Max. humidity	90 %, Non-condensing
Electrical data	
Supply voltage via solar cell	Energy harvesting
Supply voltage via optional battery	Lithium battery 3 V type CR1632
Electrical safety	
Protection class (EN 60730-1; SELV)	III
Degree of protection (EN 60529)	IP 30
EnOcean® wireless	
Frequency	868.3 MHz
Transmission power	Max. 10 mW
Range	Approx. 25 m
EnOcean® Equipment Profile (EEP)	WL A5-10-03

5. Mounting

5.1 Preparing mounting

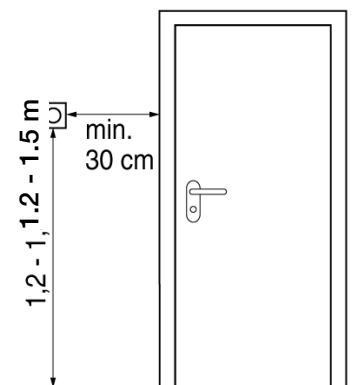
In case of using multiple products, create an installation diagram that shows the individual installation locations prior to installation. Label the individual products with a number or the name of the installation location as shown in the diagram.

- ⇒ Make sure all connected devices are accessible at the installation location.
- ⇒ Make sure the installation location is not situated in shielded areas or niches.
- ⇒ Make sure the solar-powered energy storage is charged.
 - Normal daylight is sufficient to charge the energy storage.
 - Direct sun exposure decreases the charging time.

5.2 Connect the product via EnOcean®.

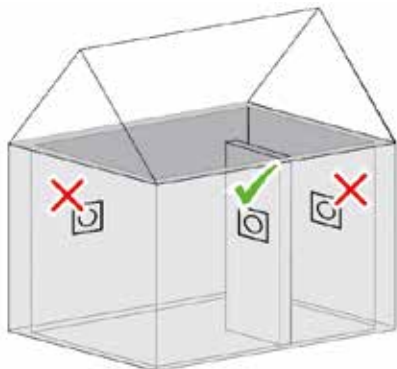
Connect the product with the recommended EnOcean components before you install it (see section "Connecting the product to the WL connection module").

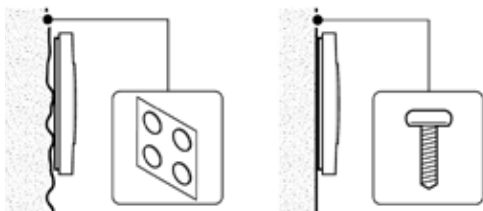
5.3 Mounting the product



Cold walls and draughts affect temperature measurement.

Mount the product to inner walls and at an adequate distance from doors and windows.





Stick the product to uneven walls using the adhesive dots supplied. Screw or glue the product to even walls.

5.2.1 Sticking the product to a wall

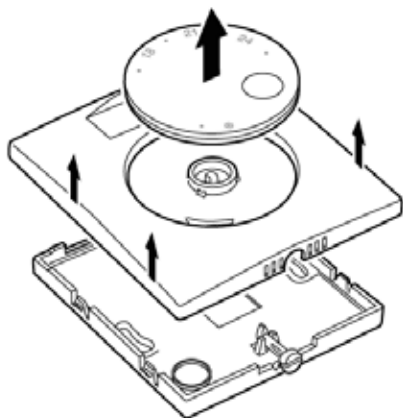
1. Stick the product to the wall using the adhesive dots.

5.2.2 Screwing the product to a wall

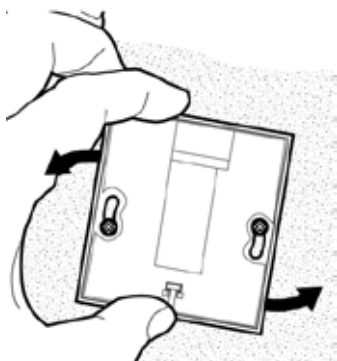
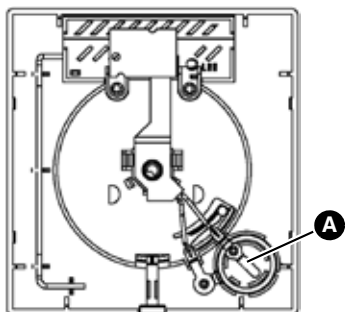


Removing the rotary dial and the upper part of the housing

1. Turn the cam screw on the underside of the product by about 90 degrees with a screwdriver.



2. Lift up and remove the twist-lock plate.
3. Remove the upper part of the housing.



Mounting by screwing

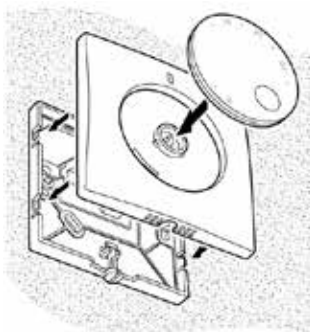
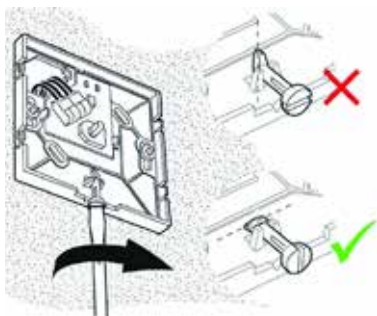
- Screw the bottom part of the housing to the even wall.

In darker environments:

- Insert a battery into the battery compartment (A) of the top housing. See "Inserting a battery (optional)".

Refitting the rotary dial and the upper part of the housing

- Turn the cam screw at the bottom of the thermostat back to the initial position using a screwdriver.



- Fit the upper part of the housing and the rotary dial to the bottom part of the housing. Verify correct position with reference to the axis of rotation when inserting the rotary dial.

5.3 Inserting a battery (optional)

If daylight is below 200 Lux, use an optional battery (see "Technical data", not included in the scope of supply).

1. Remove the twist-lock plate and the top housing (see "Installing the product").
2. Insert a battery into the battery compartment (A) of the top housing. The positive terminal (+) must be visible after inserting the battery.
3. Place the top housing and the twist-lock plate on the bottom housing.

6. Commissioning

6.1 Plug the product into the connection module WL

The installation instructions for the "Connection module WL" describe the programming process.

- ⇒ Make sure the wireless signal of the room sensor reaches the connection module WL and that the room sensor is located close to the connection module.



1. Use the tip of a paper clip to push the LRN button of the product for at least 0.5 seconds.

6.2 Function test

⇒ Verify that the room temperature is between 15 °C and 25 °C.

1. Set the product to be tested for frost protection.
2. Set the product to be tested to 30°C.
 - After no more than one minute, the yellow LED lights up at the connection module WL to which the product is connected.
3. Verify that the product to be tested is connected to the correct control circuit.
4. Repeat this procedure for all other products.

7. Operation

7.1 Adjusting the room temperature

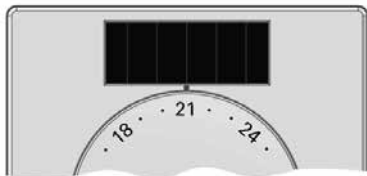
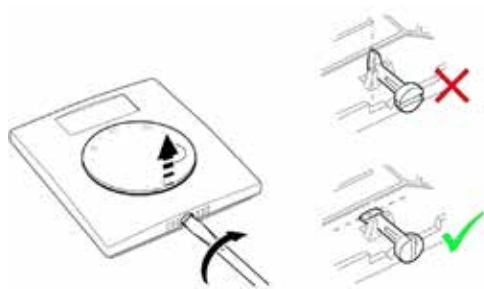


Fig. 1: Adjusted room temperature (example 21 °C)

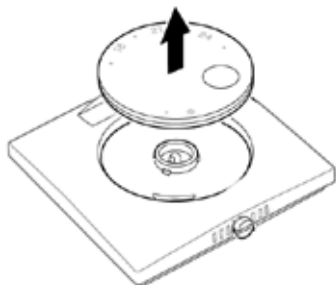
1. Adjust the desired temperature at the thermostat.
 - Without temperature reduction:
The room temperature is set to the adjusted value
 - With temperature reduction:
The room temperature is set to a value 4 K below the adjusted value

7.2 Limiting temperature adjustments

The adjustment range of the rotary dial is factory-set to a minimum of 8 °C and a maximum of 30 °C by means of restrictors. You can change the minimum and maximum temperature setting by adjusting the limiter.

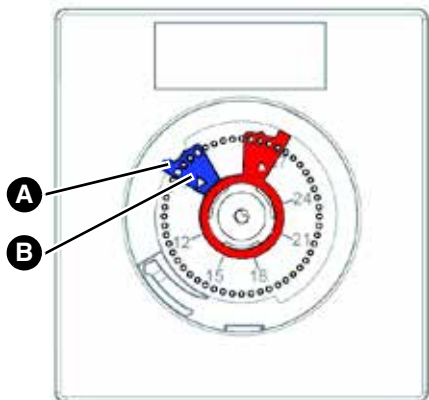


1. Turn the cam screw on the underside of the product by about 90 degrees with a screwdriver.



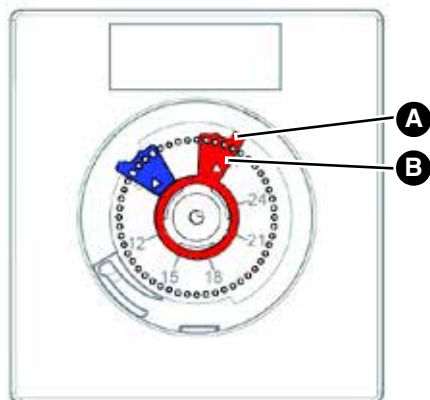
2. Lift up and remove the twist-lock plate.

7.2.1 Setting the minimum temperature



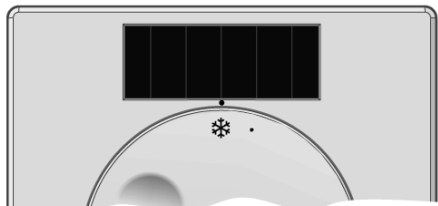
1. Lift the blue restrictor at the flag (A).
2. Turn the blue restrictor with the restrictor adjustment edge (B) to the desired value for the minimum temperature and refit it.

7.2.2 Setting the maximum temperature



1. Lift the red restrictor at the flag (A).
2. Turn the red restrictor with the restrictor adjustment edge (B) to the desired value for the maximum temperature and refit it.
3. Turn the cam screw at the bottom of the thermostat back to the initial position so that you can refit the rotary dial.
4. Place the twist-lock plate on the top housing.

7.2.3 Frost protection function



- Without temperature reduction:
The room temperature is adjusted to 8 °C.
- With temperature reduction:
The room temperature is adjusted to 4 °C.

Fig. 2: Frost protection (8 °C)

8. Maintenance

Time	Activity
If necessary	replace the optional battery

9. Troubleshooting

System impairments may only be addressed by the manufacturer.

10. Decommissioning, disposal

Dispose of the product in compliance with all applicable directives, standards and safety regulations. Electronic components and batteries may not be disposed of in household waste.



1. Dismount the product (see chapter "Mounting", reverse sequence of steps).
2. Remove the battery (see section "Inserting a battery (optional)" in reverse order).
3. Dispose of the product and the optional battery separately.

11. Warranty

See our terms and conditions or your purchase contract for information on warranty.

12. Spare parts and accessories

Product

Product designation	Part no.	Figure
Room sensor WL	BTERWL/BW	

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